

## BELSPO Open Research Data Mandate

This Open Research Data (ORD) mandate applies to digital data (and associated metadata)<sup>1</sup>, collected or created within the scope of research projects wholly or partially funded by BELSPO. It relates to data needed to validate results in scientific publications but also to other curated and/or raw data specified in the Data Management Plan (DMP).<sup>2</sup>

BELSPO recommends researchers to deposit said data in a certified and trusted on line repository and/or data centre<sup>3</sup> so as to allow for third parties to access, mine, exploit, reproduce and disseminate it, free of charge for any user, at the latest at the same time as the publication they underpin, thereby complying with the internationally adopted FAIR principles (findable, accessible, interoperable and reusable) with a particular emphasis on machine readability. Starting 2020, this deposit will be compulsory.

Data sets will be linked to the scientific publication they underpin and which have either been deposited in, or linked to Orfeo, BELSPO's central Open Access Repository for publications.

Data must be provided in a format and under terms that permit full redistribution and full reuse of the data. The Creative Commons CC0 license is recommended so as to remove any legal doubt about whether researchers can reuse the data.<sup>4</sup> Protocols and standards used to structure data (i.e. fully reference the metadata) will have to be provided for assessment, reproduction and interoperability purposes.<sup>5</sup>

Some data may need protection. BELSPO therefore observes the “as open as possible, as closed as necessary” principle. Research data may be protected under the copyright law or for privacy and security reasons. Author's rights apply if the data is arranged into a database.<sup>6</sup> A staged approach will provide access for communities of certified users, adapting the degree of certification of users to the sensitivity of the data.

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<sup>1</sup> Temporary references : The Open Archival Information System (OAIS) or OpenAIRE (<https://guidelines.openaire.eu/en/latest/data/index.html>).

<sup>2</sup> BELSPO is currently comparing DMPs issued by DMPBelgium templates which are available to paying members, FWO DMPs adopted by several universities and BELSPO's Research Programme Department requirements to be considered for this mandate. In the meantime, template samples developed for the Biodiversity Platform operating the GBif repository (<https://www.gbif.org/>) may be considered.

<sup>3</sup> Consult the Registry of Research Data Repositories - re3data.org or the Data Seal of Approval. Typical target repositories for BELSPO research are : SOHDA for humanities and social sciences, GBif for Biodiversity, Oceanographic Data for marine biodiversity, Zenodo, etc.)

<sup>4</sup> <https://wiki.creativecommons.org/wiki/CC0>

<sup>5</sup> Recommendable examples are DataCite or Research Data Alliance (RDA).

<sup>6</sup> Temporary reference : <https://www.gbif.org/terms/data-publisher>

Grant applicants who will generate data are required to provide a DMP as the main tool through which to address comprehensively data management. BELSPO recognises DMP templates drafted by DMP Belgium. The DMP will address management issues such as the choice of data types (surveys, sequences, manuscripts, objects, ... ) and standards, metadata standards, long term preservation, storage and back up measures, information about, and where possible provide, the tools and instruments necessary for proper data analysis, required equipment or infrastructure, persistent identification of datasets, embargoes, restrictions, stakeholder roles and responsibilities, presentation and distribution. The DMP presented with the grant application need not be definitive but must be completed no later than 6 months after the project starting date.

Indicators and measures for data sharing will be incorporated into institutional assessment and individual researcher evaluation processes, researcher recruitment, advancement and grant attribution at an equivalent level to bibliographic record.

November 19, 2019.

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